

HF  
6314  
M6

UC-NRLF



QB 335 472

UNITED STATES BUREAU OF EFFICIENCY

HERBERT D. BROWN, Chief



LIST OF REFERENCES  
ON  
SCIENTIFIC MANAGEMENT  
AS THE BASIS OF EFFICIENCY

WITH SPECIAL REFERENCE TO  
THE GOVERNMENT SERVICE

Compiled by

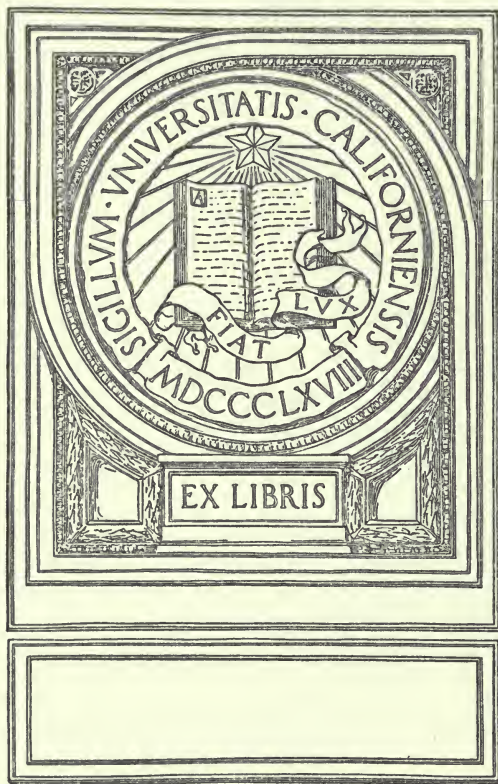
H. H. B. MEYER

CHIEF BIBLIOGRAPHER, LIBRARY OF CONGRESS

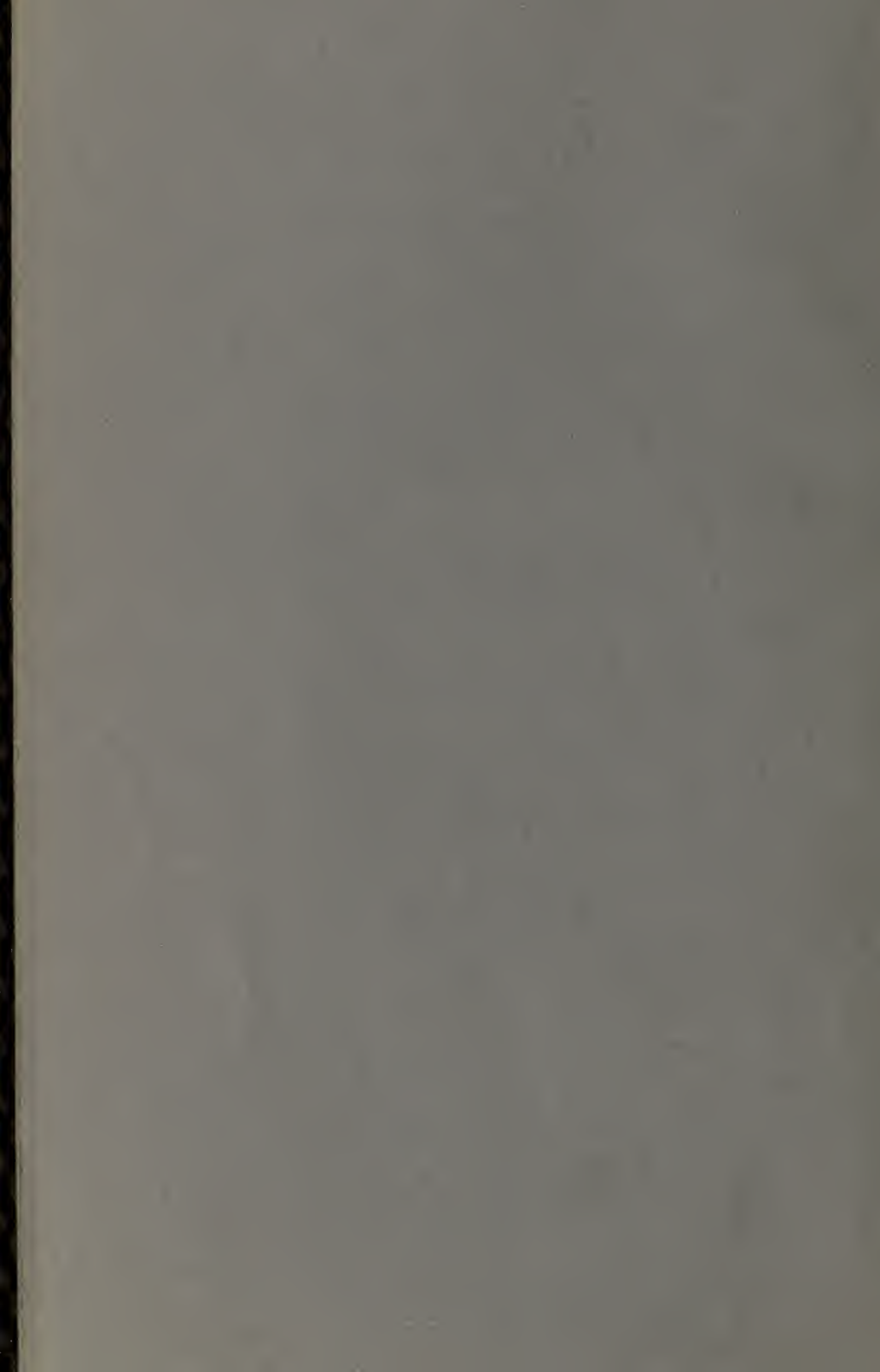


WASHINGTON  
GOVERNMENT PRINTING OFFICE

1920







UNITED STATES BUREAU OF EFFICIENCY

HERBERT D. BROWN, Chief

---

LIST OF REFERENCES  
ON  
SCIENTIFIC MANAGEMENT  
AS THE BASIS OF EFFICIENCY

WITH SPECIAL REFERENCE TO  
THE GOVERNMENT SERVICE

---

Compiled by

H. H. B. MEYER

CHIEF BIBLIOGRAPHER, LIBRARY OF CONGRESS



WASHINGTON  
GOVERNMENT PRINTING OFFICE

1920

## PREFATORY NOTE

This list was compiled at the request of Mr. Herbert D. Brown, Chief, United States Bureau of Efficiency, and represents a selection of the more useful books and articles from a great mass of literature. The annotations are based on an actual examination of the material and are descriptive of intent and scope rather than evaluative. Those desiring a more comprehensive survey of the literature will find it in Drury (14) or Thompson (41) listed below. Mr Thompson has also published a bibliography with the title "Books on scientific management," with evaluating notes. Those interested in some special phase or application of the subject should consult the analytical index at the end.

TO THE  
BUREAU OF EFFICIENCY

See  
coll  
gift.



## BOOKS.

1. AMAR, JULES. The physiology of industrial organization and the reemployment of the disabled. Tr. by Bernard Miall; ed., with notes and an introduction, by Professor A. F. Stanley Kent. London, The Library press limited, 1918. 371 p.

T58.A53

Discusses in detail the physiological basis of human labor, the functions of man, psycho-physiology, fatigue, food, drink, training, apprenticeship, and the reeducation of war cripples, functional reeducation, scientific prothesis and professional reeducation. Illustrations of modern apparatus.

2. AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE, *Philadelphia*. Personnel and employment problems in industrial management . . . Editors in charge of this volume, Meyer Bloomfield . . . and Joseph H. Willits . . . Philadelphia, The American academy of political and social science, 1916. 326 p. (*Its Annals*. vol. LXV, whole no. 154)

H1. A4 vol. 65

HF5549.A6

Papers on personal element, employment manager, labor turnover, hiring and discharge of employees, mental tests, physical examination, interviewing employees, instruction, records and reports of work, motion study, home conditions.

3. ——— Stabilizing industrial employment; reducing the labor turnover. Editor in charge of this volume, Joseph H. Willits. Philadelphia, The American academy of political and social science, 1917. 246 p. (*Its Annals*. vol. LXXI, whole no. 160)

H1.A4 vol. 71

HF5549.A7

Devoted to labor turnover and its reduction, cost of turnover, standardization of working conditions, medical supervision, factory nurse, absences, lateness, employees representation on managing boards.

- 3a. ARNOLD, JACOB H. Farm management. New York, The Macmillan company, 1919. 243 p.

S561.A73

"Literature related to the subjects discussed," p. 24;  
"Books on farm management or on related subjects": p. 242-243.

An attempt to show that a farm may be considered an organization to which the principles of scientific management may be applied, resulting in increased crops, elimination of waste, and conservation of the soil, fertility and other resources.

4. BLACKFORD, Mrs. KATHERINE M. H. and ARTHUR NEWCOMB. The job, the man, the boss. Garden City, New York, Doubleday, Page & company, 1914. 266 p. T58.B55

Describes the Blackford plan of employment, which seeks to place the person most fit to perform any given work. Emphasizes the value of early vocational guidance.

- 4a. BLOOMFIELD, DANIEL, *ed.* Selected articles on modern industrial movements. New York city, The H. W. Wilson company, 1919. 377 p. (The handbook series)

Bibliography: p. xi-xxii.

HD4851.B6

Contains a Brief for scientific management, a reprint of Judge Brandeis' brief, part of a lecture by H. S. Person giving the basic principles, plans and policies, range of application, and effect on production and distribution and on workmen. Guild socialism is discussed by G. D. H. Cole, and there is a section on Management sharing.

- 4b. BLOOMFIELD, MEYER. Labor and compensation. New York, Industrial extension institute [1917]. 445 p. (Factory management course and service. V. 7) TS155.F48

HF5549.B75

A detailed summary of the whole question as it relates to the worker. Discusses the employment department, organizing the labor supply, analyzing the job, conditions of work, selection of employees, labor turnover, labor executive, promotion, transfer, training, group insurance, industrial and social insurance, housing, and employment forms.

5. ——— Management and men; a record of new steps in industrial relations. New York, The Century co., 1919. 591 p.

HD8390.B55

Devoted to a discussion of methods used in industrial trades in Great Britain to meet conditions created by the war necessitating new industrial relations. Does not attempt to give details of management, but shows how the problems of industry, such as housing, increased output, closer relations between employer and employee, are being met in Great Britain.

- ✓ 6. BRANDEIS, LOUIS D. Scientific management and railroads; being part of a brief submitted to the Interstate commerce commission. New York, The Engineering magazine, 1911. 92 p.

HE1621.B8

Discusses the influence of scientific management upon the public, upon the railroads and upon the employees, relations of organized labor.

Mr. Brandeis' brief gave rise to considerable periodical literature which is carefully reviewed by Mr. C. B. Thompson in his "Theory and practice of scientific management," 1917, p. 220-229.

- ✓ 7. BRISCO, NORRIS A. Economics of efficiency. New York, The Macmillan company, 1914. 385 p. T58.B7

"References" at end of each chapter.

A general treatise, emphasizing the elimination of waste, the conservation of workers, and the relation to future industrial progress. Discusses the relation of management to the plant, organization, coordination, location and design



of buildings, saving waste products, storage of materials; also the relation of management to labor, loyalty, incentive, handling men, labor turnover, promotion, punctuality, discipline. Has chapters on hiring of labor, training, habits, fatigue, health and welfare work, accidents and fire prevention, wages, piece rate systems and relation of organized labor to efficiency methods.

8. CHURCH, ALEXANDER H. The science and practice of management. New York, The Engineering magazine co., 1914. 535 p. (Works management library) TS155.C84

Attempts to formulate the working principles of scientific management as related to

- (1) The systematic accumulation and use of experience;
- (2) The economic control (or regulation) of effort;
- (3) The promotion of personal effectiveness.

Part I of the book divides the organic functions of manufacturing into five varieties, Design, Equipment, Control, Comparison, Operation. Formulates three laws of effort and shows how they are applied to the five functions. Part II discusses the practical organization of the organic functions. Has appendix on Labor question, piece work, bonus system.

9. COLVIN, FRED H. Labor turnover, loyalty and output; a consideration of the trend of the times as shown by the results of war activities in the machine shops and elsewhere. New York, McGraw-Hill book company, 1919. 152 p.

HF5549.C6

Largely devoted to the reduction of labor turnover, workers share in shop management, interest in work and instruction in the shop. Has chapters on employment manager and collective bargaining.

10. COOKE, MORRIS L. Academic and industrial efficiency; a report to the Carnegie foundation for the advancement of teaching. New York city [1910] 134 p. (The Carnegie foundation for the advancement of teaching . . . Bulletin no. 5)

LB2334.C4 no. 5

LA226.C73

Report of a critical examination of the physics department in a number of universities made by an efficiency expert. Considers organization, economic use of buildings, financial administration, etc., with tables and diagrams.

11. DAY, CHARLES. Industrial plants; their arrangement and construction. New York, The Engineering magazine, 1911. 294 p. (Works management library) TS155.D3

Devoted largely to the planning and construction of an industrial plant, installation of equipment, commencement of operation, routing, and value of expert engineering.

12. DICKSEE, LAWRENCE R. and HERBERT E. BLAIN. Office organization and management including secretarial work. London, Sir I. Pitman & sons, ltd., 1906. 298 p. HF5547.D5

Describes English practice in the organization of a business office, including personnel, division of responsibility, correspondence, advertising, stores, cost accounts, stock taking, business law, and insurance,—and includes forms.

- ✓ 13. DIEMER, HUGO. Factory organization and administration. 2d ed., rev. enl. and reset. New York, McGraw-Hill book company, inc., 1914. 378 p. TS155.D5 1914  
 "A bibliography of works management": p. 356-370.

One of the important books on the application of scientific management to factories. Discusses factory location, planning of buildings, organization and departments, employing of labor, stores and stock, shipping and receiving, time taking, cost accounting, inventory, inspection, time study, wages, and lastly gives a bibliography.

- ✓ 14. DRURY, HORACE B. Scientific management; a history and criticism. New York, Columbia university, 1915. 222 p. (Studies in history, economics and public law, ed. by the Faculty of political science of Columbia university. vol. LXV, no. 2: whole no. 157) H31.C7 vol. 65, no. 2  
 T58.D7

Part 1 is a history of scientific management with some account of the leaders in the movement, and a survey of the principal plants in which scientific management has been introduced. Part 2 is a criticism of certain aspects such as its effect on output, on the laborer, on the relations with organized labor. Has chapter on the humanizing effect including promotion, and wages.

- ✓ 15. EASTMAN, GEORGE R. Psychology for business efficiency. Dayton, O., The Service publishing company [1916] 265 p. BF56.E25

Shows the relation of psychology to business, the value of a knowledge of mental processes, discusses the various kinds of interest one must strive to attain, and methods of influencing behavior. Has chapters on art of memorizing, on fashion and fads, on solicitation, temperamental qualities, habit and adaptability.

- ✓ 16. EMERSON, HARRINGTON. Efficiency as a basis for operation and wages. 3d ed., rev. and enl. New York, The Engineering magazine, 1912. 254 p. (Works management library)  
 HD31.E62

No less in importance than his "Twelve principles." Discusses existing systems of management in comparison with scientific management, organization for efficiency, standards, cost accounting, waste location and elimination, bonus system. Lays stress on the human element in the problem.

- ✓ 17. ——— The twelve principles of efficiency. New York, The Engineering magazine, 1912. 423 p. T58.E4

One of the classics of the subject, admirable to begin the subject with. The twelve principles are, 1. Clearly defined ideals, 2. Common sense, 3. Competent counsel, 4. Discipline, 5. The fair deal, 6. Satisfactory records, 7. Dispatching, 8. Standards and schedules, 9. Standardized conditions, 10. Standardized operations, 11. Written standard practice instruction, 12. Efficiency reward. Has also chapters on organization for efficiency, elimination of waste and executive control of line and staff.



18. EVANS, HOLDEN A. Cost keeping and scientific management. New York, McGraw-Hill book company, 1911. 252 p.

HF5686.C8E8

Chiefly devoted to cost accounts and their influence in scientific systems of management. Discusses need for accuracy, their purpose, distribution of indirect costs, methods of paying labor, management, waste time and time studies, and machine shop methods.

Shows how economics were effected in the shops of a navy yard by scientific management and to what extent scientific management may be applied by a manager not an expert in scientific management.

19. GALLOWAY, LEE. Office management, its principles and practice; covering organization, arrangement, and operation, with special consideration of the employment, training, and payment of office workers. New York, The Ronald press company, 1918. 701 p.

HF5547.G2

Devoted entirely to office management. Discusses the location, layout, equipment, handling mail, filing, stenographic work, purchases, stores, salesmanship, advertising, training of employees, business language, wages, bonus system, and vacations.

20. GANTT, HENRY L. Industrial leadership; addresses delivered in the Page lecture series, 1915, before the Senior class of the Sheffield scientific school, Yale university. New Haven, Yale university press, 1916. 128 p.

T58.G3

This is one of the important books on the subject, but not so readily understood as Taylor, Gilbreth, or Emerson. Discusses the qualification for industrial leadership, the training of workmen, task work, and production and sales.

- 20a. ——— Organizing for work. New York, Harcourt, Brace and Howe, 1919. 113 p.

HD2326.G3

Discusses the industrial problem of employer and employee, and the place of the efficiency engineer in its solution. Advocates a greater democracy in industrial establishments to increase productivity rather than profits.

21. ——— Work, wages, and profits; their influence on the cost of living. New York, The Engineering magazine, 1910. 194 p. (Works management library.)

HD4909.G3

Largely devoted to an explanation of the development and application of the "Gantt bonus plan" based on the standard quantity and quality of work known as the task. Has chapters on day work, piece work and task work with a bonus, on training workmen in habits of industry and cooperation and on profits and their influence on the cost of living.

22. GILBRETH, FRANK B. Primer of scientific management . . . with an introduction by Louis D. Brandeis. New York, D. Van Nostrand company, 1912. 108 p.

T58.G6

A critical and analytical discussion in elementary terms of the Taylor system. It defines the terms, states the laws, shows the effect on the worker and the work.

- ✓ 23. GILBRETH, FRANK B., and LILLIAN M. GILBRETH. Applied motion study; a collection of papers on the efficient method to industrial preparedness. New York, Sturgis & Walton company, 1917. 220 p. T58.G42

Discusses in great detail the need of motion study for conserving human energy and the application of the results to industrial operations. Special attention to motion study in relation to the crippled soldier.

- ✓ 24. ———— Fatigue study, the elimination of humanity's greatest unnecessary waste; a first step in motion study. New York, Sturgis & Walton company, 1916. 159 p. T58.G45

Elementary discussion with illustrations. Shows method of study and survey and what can be done under ordinary conditions and how to introduce scientific methods of elimination. Has chapter on reading box movement and on fatigue museum.

25. GOLDMARK, JOSEPHINE C. Fatigue and efficiency; a study in industry. New York, Charities publication committee, 1912. 591 p. (Russell Sage foundation publication.) HD5106.G7

A comprehensive study of fatigue, muscular and nervous. Discusses the causes in modern industry, speed, complexity, monotony, noise, piecework, and over-time; the physiological effects, economic aspects, relations to scientific management. Has two chapters on labor laws. The second part discusses the dangers of long hours, benefits of short hours, economic aspect of regulation of hours of labor, advantages of uniformity of restriction.

- ✓ 26. HARTNESS, JAMES. The human factor in works management. New York, McGraw-Hill book company, 1912. 159 p. T58.H3

Chiefly devoted to habit and its influence in scientific management, touches on influence of fatigue, examples drawn from machine shop experience.

- ✓ 27. HOXIE, ROBERT F. Scientific management and labor. New York and London, D. Appleton and company, 1915. 302 p. T58.H63

A careful and impartial study of the relations between scientific management and organized labor. It presents both sides and in an Appendix prints the claims of each with an enumeration of the vital points at issue and offers a questionnaire for detailed investigation.

- ✓ 27a. IOTAYKO, JOSEFA. The science of labour and its organization. London, G. Routledge & sons, limited; New York, E. P. Dutton & co., 1919. 199 p. (Efficiency books.) T58.I6

These essays which appeared originally in French reviews discuss the economic method of working the body, industrial fatigue, scientific management, aptitude, food and work, left-handedness, and Belgian method of technical education.



28. JONES, EDWARD D. The administration of industrial enterprises, with special reference to factory practice. New York, Longmans, Green and co., 1916. 442 p.

Contains bibliographies.

T56.J6

Gives a complete review of the application of scientific management to an industrial enterprise, the location, layout, buildings, power, administrative organization, works manager, employment of labor, cost accounting, fatigue, wages, and wage systems of Halsey, Rowan, Taylor, Gantt and Emerson, welfare work, office, stores, selling, advertising, traffic, and audit and collection.

29. JONES, FRANKLIN D. and EDWARD K. HAMMOND. Shop management and systems; a treatise on the organization of machine building plants and the systematic methods that are essential to efficient administration. New York, The Industrial press, 1918. 307 p.

TJ1135.J7

Discusses the application of scientific management to machine building plants. Gives specific examples of exact working details with abundant illustrations and forms. Covers methods of ordering materials, accounting for materials in stock, following progress of work, care of tools, inspection of products, organization of assembling department, and drafting room system.

30. KELLY, ROY W. Hiring the worker. New York, The Engineering magazine co., 1918. 250 p. (Industrial management library.)

HF5549.K35

Deals primarily with employment of workers, employment departments and employment manager, selection of workers, initiation into their tasks, education, transfer, promotion and discharge. Gives specimen blanks and forms used. Discusses labor turnover and contains a bibliography (p. 217-244).

31. KNOEPEL, CHARLES E. Installing efficiency methods. New York, The Engineering magazine, 1915. 258 p. (Works management library.)

T58.K6

Gives an example of methods of preliminary study, business analysis, organization, relation of the efficiency engineer, the management and the men. Discusses with examples time study, planning department, standardizing working conditions and operations, and bonus plan of wage payment. Has chapters on efficiency clearing house, and manufacturing costs.

32. LEE, FREDERIC S. The human machine and industrial efficiency. New York, Longmans, Green and co., 1918. 119 p.

T58.L33

A very valuable study of industrial physiology covering output, fatigue, rest, length of working day, maintenance of working power, overtime, labor turnover, women, night work, accidents, industrial medicine, food, physiological organization of work, and including a bibliography (p. 105-113).

33. LEWIS, ELIAS ST. ELMO. Getting the most out of business; observations of the application of the scientific method to business practice. 5th ed. New York, The Ronald press company, 1916. 515 p.

HF5500.L4 1916

Discusses in popular style application of efficiency methods to business. Has good chapters on loyalty, methods of instruction, salesmen, cooperation as opposed to one man rule, discipline, wages.

34. PARKHURST, FREDERIC A. Applied methods of scientific management. New York, J. Wiley & sons, 1912. 325 p. T58.P2

Description in detail, with chart of organization, of the application of scientific management to a concrete example, the Ferracute Machine co., makers of presses and dies. Includes preliminary investigation, form of organization, discipline of the departments, duties of various clerks, routing system, stores, standardization of methods and tools, with example of course of an order from first inquiry to final shipment, with blanks and forms.

- ✓ 35. PATTISON, Mrs. MARY S. H. Principles of domestic engineering; or, The what, why and how of a home; an attempt to evolve a solution of the domestic "labor and capital" problem—to standardize and professionalize housework—to re-organize the home upon "scientific management" principles—and to point out the importance of the public and personal element therein, as well as the practical. [New York, The Trow press, 1915] 310 p. TX145.P3

Attempts to apply scientific management to the home, discusses the budget, servants, laundry work, food, system in the home, organization of the family, domestic independence, hospitality, exercise, clothing, beauty in home, education, heating, light, ventilation, water, pests, moral standards.

- ✓ 36. PEIRCE, FREDERICK. The human side of business. Philadelphia, The Investment house of F. Peirce & co., 1917. 214 p. HF5438.P4

Discusses the application of scientific management to the bond business. Has chapters on salesmanship, employing men, training men, and development of business.

- ✓ 37. SCOTT, WALTER D. Increasing human efficiency in business; a contribution to the psychology of business. New York, The Macmillan company, 1911. 339 p. HF5500.S4

Discusses the various means of increasing human efficiency by imitation, competition, loyalty, concentration, wages, pleasure, sporting spirit or love of the game, relaxation, speed or rate of improvement; has also chapters on judgment and habit formation.

- ✓ 38. TAYLOR, FREDERICK W. Shop management. New York and London, Harper & brothers, 1911. 207 p. TS155.T26

No less important than his "Principles of scientific management," and fundamental to the understanding of the subject of scientific management. Develops the four principles (a) A large daily task, (b) Standard conditions, (c) High pay for success, (d) Loss in case of failure. Discusses selection of workmen, their training and development, and cooperation between management and workmen.



39. TAYLOR, FREDERICK W. The principles of scientific management. New York and London, Harper & brothers, 1911. 77 p. T58.T3

This is one of the classics of scientific management. It analyzes the previously existing conditions, and shows the interdependence of management and worker, and how to substitute scientific management for older types. Gives some actual examples in outline of application to machine shops.

40. THOMPSON, CLARENCE B. The Taylor system of scientific management, . . . A report, in manual form, on the accomplishments of scientific management, supplemented with a discussion of how to secure some of the most important of these accomplishments. Chicago, A. W. Shaw company [1917]. 175 p.

Bibliography: p. 171-175. T58.T4 1917

Report based on an examination of plants in twelve states. Attempts to distinguish between the Taylor system and other systems of scientific management. Describes Taylor system from actual examples with photographic illustrations, and examples of instruction cards, identification tags, etc.

41. ——— The theory and practice of scientific management. Boston, New York, Houghton Mifflin company [1917]. 319 p. Bibliography: p. 271-308. T58.T55

Discusses the effect on employees, on the public and on organized labor. Devotes much space to the economic aspects of scientific management, but its most valuable feature is the critical discussion of the literature of the subject and extensive bibliography under the headings, development and theory, in operation, applied to railroads, methods, personal factor, organized labor.

42. ——— *ed.* Scientific management; a collection of the more significant articles describing the Taylor system of management. Cambridge, Harvard university press, 1914. 878 p. (Harvard business studies, v. 1) T58.T5

"Bibliography of scientific management": p. 861-878.

Contains papers on Unsystematized, systematized, and scientific management, Planning department, Foreman's place, Slide rules for the machine shop, Tool room, Classification and symbolization, Time study, Retailing, Railroads, Piece rate system, Wages and wage systems, Efficiency engineering, Taylor system, Women's work, and the Workman's standpoint.

43. TIPPER, HARRY. The new business. [Garden City, New York] Pub. by Doubleday, Page & company for the Associated advertising clubs of the world, 1914. 391 p. HF5351.T5

Devoted largely to a discussion of methods of marketing manufactured products, financial control of marketing, cost of marketing, competitive selling, advertising, organization for marketing, good-will, buying habits.

44. U. S. *Congress. House. Committee on labor.* Investigation of Taylor system of shop management. Hearings . . . Sixty-second Congress, first session, on House resolution 90 . . . Washington, Govt. print. off., 1911. 70 p. T58.T4

Gives in detail the attitude of labor organizations, and includes a lengthy statement of Mr. H. F. Stimpson attempting to be fair to both sides and a reprint of some of his articles.

45. ———— ———— ———— "Taylor system" of shop management . . . Report. (To accompany H. res. 90) [Washington, Govt. print. off., 1911] 12 p. (62d Cong. 1st sess. House. Rept. 52) T58.T4 1911a

This report recommends that the resolution authorizing the Committee on Labor to investigate the Taylor system be passed. Reprints Taylor's Shop management.

- ✓ 46. ———— ———— *Special committee to investigate the Taylor and other systems of shop management.* The Taylor and other systems of shop management. Hearings . . . under authority of H. res. 90 . . . [Oct. 4, 1911–Feb. 12, 1912] Washington, Govt. print. off., 1912. 3 v. T58. T4 1912

William B. Wilson, Chairman.

These hearings offer an immense mass of information of scientific management from every point of view. Includes a statement by Mr. F. W. Taylor, v. 3, p. 1377–1509. There is only a name index.

47. ———— ———— *Committee on labor.* "Taylor system" of shop management . . . Report. (To accompany H. R. 17800.) [Washington, Govt. print. off., 1914] 13 p. (63d Cong., 2d sess. House. Rept. 1175) T58. T4 1914a

Recommends passage of bill to eliminate stop watch and premium payments in government shops.

48. ———— ———— ———— The stop watch and bonus system in government work. Hearings . . . Sixty-third Congress, second session, on H. R. 8662, a bill to prevent the use of the stop watch or other time-measuring device on government work and the payment of premium or bonus to government employees, and for other purposes. April 17, 18, and 20, 1914. Washington, Govt. print. off., 1914. 117 p. T58. U6 1914

David J. Lewis, Chairman.

Contains statements of representatives of labor in opposition to the systems of scientific management used in government shops, also a statement of General Crozier relating to experiences in the Watertown Arsenal.

49. ———— ———— ———— Methods of directing the work of government employees. Hearings before the Committee on labor, House of representatives, Sixty-fourth Congress, first session, on H. R. 8665, a bill to regulate the method of directing



the work of government employees. March 30, 31, April 1, and 4, 1916. Washington, Govt. print. off., 1916. 368 p.

T58. U6 1916b

Includes statements of Mr. Henry R. Towne, Mr. S. E. Thompson, Mr. Henry T. Noyes, Mr. John Dunlap, and other engineers and manufacturers, also of General Crozier, and representatives of employees organizations, the latter pointing out certain abuses of the system. Enumerates objections of union labor and claims of scientific managers.

50. U. S. *Congress. House. Committee on labor.* Method of directing the work of government employees . . . Report. (To accompany H. R. 8665.) [Washington, Govt. print. off., 1916] 47 p. (64th Cong., 1st sess. House. Rept. 698)

T58. U6 1916a

This report favored the passage of the bill prohibiting the use of the stop watch in making time studies and payment of bonus. Includes a minority report by Mr. E. E. Browne adverse to the provisions of the bill which constitutes a condensed résumé of the subject of scientific management.

51. U. S. *War dept.* Time study and premium payments. Letter from the secretary of war, relative to a provision in the army appropriation bill against time study and premium payments at government establishments . . . [Washington, Govt. print. off., 1915] 64 p. (63d Cong., 3d sess. Senate. Doc. 800)

T58. U6 1915

This document is made up of detailed statements concerning the operations of the system in government shops, quotes the objections of labor and gives tables of the premiums earned.

52. ——— Premium payments in government employment. Letter from the secretary of war, submitting information relative to time studies and premium payments in government employment . . . [Washington, Govt. print. off., 1916] 4 p. (64th Cong., 1st sess. House. Doc. 1053) T58. U6 1916

Commends the system for results accomplished and asks for a detailed investigation of the Watertown arsenal.

- 52a. WEBER, GUSTAVUS A. Organized efforts for the improvement of methods of administration in the United States. New York, London, D. Appleton and company, 1919. 391 p. (Studies in administration. The institute for government research) ✓

JK411.W4

Describes I, the various agencies for investigating governmental offices and activities of all kinds; II, the organs of central administrative control; III, the legislative reference and bill drafting agencies.

## ARTICLES IN PERIODICALS.

- ✓ 53. AMERICAN SOCIETY OF MECHANICAL ENGINEERS. The present state of the art of industrial management. Majority and minority reports of the Subcommittee on administration, with discussion. (*In its Transactions*, 1912, v. 34. New York, 1913. p. 1131-1229.) TJ1. A7, v. 34

For additional discussion of the reports see *Journal of the Society*, May, 1913, v. 35: 871-877.

The reports are also reprinted in *Journal of the Society*, Nov. 1912, v. 34: 1601-1622. TJ1. A72, v. 34

A careful analysis of the development, and application of scientific management, with attempts at a definition (p. 1138-9).

- ✓ 54. BREWER, CHARLES B. Economy and efficiency in the government. *North American review*, Mar., 1912, v. 195: 368-380. AP2. N7, v. 195

A discussion of economy and efficiency in the following executive departments: Treasury, Post-office, War, Navy and Agriculture.

55. ——— Scientific management in the army and navy. *World's work*, Jan., 1912, v. 23: 311-317. AP2.W8,v.23

Shows how the introduction of scientific management improved conditions at Mare Island, raised the marksmanship and coaling records, and effected big saving at the Watertown arsenal.

- ✓ 56. BUREAU OF MUNICIPAL RESEARCH, *New York*. A national program to improve methods of government. *Its Municipal research*, March, 1916, no. 71. JS39.M7, no. 71

Discusses especially the relation of an administrative survey to efficiency and advocates a staff specialized in the professional side of government administration.

- ✓ 57. CLEVELAND, FREDERICK A. The application of scientific management to the activities of state and municipal government. *Engineering record*, Dec. 2, 1911, v. 64: 653-655.

TA1.E62, v. 64

Outlines the manner in which the principles of scientific management may be applied.

- ✓ 58. ——— The causes of waste and inefficiency in national government. *American review of reviews*, Apr., 1912, v. 45: 466-471.

AP2.R4, v. 45

A general discussion of the causes of waste and inefficiency, and especially lack of organization and efficient personnel.

- ✓ 59. COOKE, MORRIS L. Scientific management of the public business. *American political science review*, Aug., 1915, v. 9: 488-495. JA1.A6, v. 9

Urges the application of scientific management principles to federal, state and municipal government.

60. COOKE, MORRIS L. Spirit and social significance of scientific management. *Journal of political economy*, June, 1913, v. 21: 481-493. HB1.J7, v. 21

Argues that the development of scientific management is attainable only through a course of individual and collective discipline.

61. COULSON, R. E. Are \$300,000,000 worth saving? The opportunity and the work done by the Economy and efficiency commission at Washington. *System*, Apr., 1913, v. 23: 363-371. HF5001.S9, v. 23

Describes the valuable work performed by the Commission tending toward efficiency in the government departments.

62. ——— The high cost of government. *System*, May, 1913, v. 23: 481-489. HF5001.S9, v. 23

Describes the work done by the Economy and efficiency commission to effect better organization of the government departments.

63. CROZIER, WILLIAM. Scientific management in government establishments. *Society to promote scientific management. Bulletin*, Oct., 1915, v. 1, no. 5: 1-8.

Describes the attempts to introduce scientific management methods into the arsenals.

64. DRURY, HORACE B. Democracy as a factor in industrial efficiency. *American academy of political and social science. Annals*, May, 1916, v. 65: 15-27. H1.A4, v. 65

Outlines the principles that make for the efficiency of democracy.

65. DUNAWAY, JOHN A. Some efficiency methods of city administration. *American academy of political and social science. Annals*, Mar., 1916, v. 64: 89-102. H1.A4, v. 64

Describes a few up-to-date methods already in use in the city government of Philadelphia, which, in results accomplished, point toward efficiency.

66. EMERSON, GUY C. Scientific management in the public works of cities. *National municipal review*, Oct., 1913, v. 2: 571-582. JS39.N3, v. 2

An analysis of the difficulties to be overcome in the application of the principles of scientific management to the conduct of municipal government. Argues that while the system has proved successful in industrial and commercial enterprises, it has not been accepted in its entirety by city officials, yet material progress has been made in that direction.

67. FEISS, RICHARD A. Scientific management applied to the steadying of employment, and its effect in an industrial establishment. *American academy of political and social science. Annals*, Sept., 1915, v. 61: 103-111. H1.A4, v. 61

Argues for an employment department in an industry, and shows the advantages of scientific employment of workers.



- ✓68. GEORGE, RALPH E. Increased efficiency as a result of increased governmental functions. American academy of political and social science. Annals, Mar., 1916, v. 64: 77-88. H1.A4, v. 64  
Shows that the adoption of the principles of scientific management is as necessary to effectiveness in government management as to private enterprises.
69. GILBRETH, FRANK B., and L. M. GILBRETH. What scientific management means to America's industrial position. American academy of political and social science. Annals, Sept., 1915, v. 61: 208-216. H1.A4, v. 61  
Shows how scientific management aids in the elimination of waste and in the promotion of industrial conservation.
- ✓70. LOWELL, A. L. Expert administration in popular government. American political science review, Feb., 1913, v. 7: 45-62. JA1.A6, v. 7  
*Pres. of Harvard*  
Argues that expert knowledge in the sphere of governmental action, as well as in private industries, tends toward efficiency.
71. MEYERS, G. J. The science of management. American society of naval engineers. Journal, Nov., 1911, v. 23: 994-1015. VM1.A5, v. 23  
Argues that management has its laws, the following of which tends toward success. Attempts to formulate laws of management, and follows each law by a brief statement of the reasons for it, and the methods of its application.
72. MORSE, P. Managing the government on a business basis. Forum, Dec., 1915, v. 56: 705-714. AP2.F8, v. 56  
Criticises the lack of organization of the various departments.
73. PORTER, HARRY F. Cost keeping the basis of prosperity. Engineering magazine, June, 1916, v. 51: 325-332. TA1.E59, v. 51  
A discussion of the notable work of the Federal trade commission.
- ✓74. POWER, LE GRAND. The effect of governmental efficiency upon efficiency in industry. Efficiency society, New York, Journal, July, 1913, v. 3: 39-47.  
A discussion of governmental accounting and the importance of efficiency that will be beneficial to the masses.
75. REDFIELD, WILLIAM C. The moral value of scientific management. Atlantic monthly, Sept., 1912, v. 110: 411-417. AP2.A8, v. 110  
Deals more especially with the human side of management. Argues that the principles of scientific management should not be confined to the office and equipment alone, but should be applied to the individual workers as well.



76. RIEGEL, JOHN W. National welfare through standardized reports of industrial experience. American academy of political and social science. Annals, Mar., 1919, v. 82: 253-262:

H1.A4, v. 82

Mentions several industries in which standardized uniform record systems have been introduced and points out the advantages of same.

77. ROSSITER, WILLIAM S. Present status of statistical work and how it needs to be developed in the service of the Federal government. American statistical association. Publications, June, 1914, v. 14: 85-96.

HA1.A6, v. 14

Analyzes the statistical work of the various government departments, and argues that efficiency methods should be used to overcome wastefulness and duplication.

78. TARDY, W. B. A plea for a standard organization of the engineer division aboard ship, and for a uniform method of management of the engineer department with a section devoted to the application of scientific management. American society of naval engineers. Journal, Aug., 1911, v. 23: 681-717.

VM1.A5, v. 23

Describes the methods for the standardization of the engineer department aboard ship, and discusses the administration of the department under the system of scientific management. Deals with uniformity in carrying out the work, reporting defects, method of making reports, distribution of work, executive orders, records, estimating time, standard times, military efficiency, and saving through co-ordination of ship and navy yards.

79. TAYLOR, FREDERICK WINSLOW. The principles of scientific management. Applied science, Jan., 1913, v. 25: 76-82.

A good explanation of the principles of scientific management.

80. THOMPSON, CLARENCE B. Scientific management in practice. Quarterly journal of economics, Feb., 1915, v. 29: 262-307.

HB1.Q3, v. 29

An analysis of some of the most obvious principles underlying scientific management, and a good description of the general working of the system in its various applications.

81. WADE, HERBERT T. The National bureau of standards and standards for public utilities. Engineering magazine, May, 1915, v. 49: 240-251.

TA1.E59, v. 49

Describes the work of the Bureau of standards recently inaugurated involving the determination of standards of service for public utilities.

82. WEBSTER, N. E., *and others*. Primer on cost keeping in government work. Government accountant, Aug., 1908, v. 2: 148-167.

HJ9701.G7, v. 2

Outlines a system of cost accounting for government work.



# INDEX.

	Page.		Page.
Absences.....	3	Comparison of methods.....	8
Academic efficiency.....	10	Competition.....	37
Accident prevention.....	7	Complexity of work.....	25
Accidents.....	32	Concentration.....	37
Accounting, governmental.....	74	Conservation of human energy.....	23, 24
Adaptability.....	15	Conservation of workers.....	7, 69
Advertising.....	12, 19, 28, 43	Control of line and staff, executive..	17
Apparatus for reeducation of war cripples.....	1	Control of operations.....	8
Apprenticeship.....	1	Cooperation.....	4a, 21, 33, 38
Army, United States.....	55	Correspondence.....	12
Arsenals, United States.....	63	Cost accounting.....	12,
<i>See also</i> Watertown, Mass.		13, 16, 18, 28, 31, 73, 82	
Assembling department, organiza- tion of.....	29	Counsel, competent.....	17
Audit and collection.....	28	Crippled soldier, motion study.....	23
Behavior, influencing.....	15	Daily task.....	38
Belgian method of technical educa- tion.....	27a	Day work.....	21
Bibliography 3a, 4a, 7, 13, 28, 30, 32, 41, 42		Democracy, efficiency in.....	64
Bill-drafting services.....	52a	Democracy in industrial establish- ments.....	20a
Blackford plan.....	4	<i>See also</i> Labor representation.	
Body, working the.....	27a	Design of plants.....	8, 11, 13
Bond business.....	36	Discharging workers.....	2, 30
Bonus system.....	8, 16, 19, 21, 28, 31	Discipline.....	7, 17, 33, 34, 60
Governmental work.....	44-52	Dispatching.....	17
Brief.....	4a	Drafting-room system.....	29
Buildings.....	7, 28	Domestic engineering.....	35
Universities, economic use of... ..	10	Drink.....	1
<i>See also</i> Plants, industrial.		Duties of clerks.....	34
Bureau of Standards, U. S.....	81	Economic aspects.....	41
Business.....	12, 15, 16, 19, 33, 36, 37, 43	Education. <i>See</i> Training.	
Analysis.....	31	Efficiency engineer.....	20a
Development.....	36	Efficiency engineering.....	31, 42
Forms.....	12	Effort, economic control.....	8
Language.....	19	Laws of.....	8
Law.....	12	Emerson wage system.....	16, 17, 28
Psychology.....	37	Employees, effect on.....	4a, 14, 41, 42, 67
Buying habits.....	43	Employer and employee, relations. .5,	
Classification.....	42	8, 20a, 38	
Clearing house, efficiency.....	31	Employment department.....	4b, 30, 67
Collective bargaining.....	9	Employment management.....	19, 30
Collection.....	28	Employment manager.....	2, 4b, 9, 30
Collegiate efficiency.....	10	Equipment of office.....	19
Common sense.....	17	Equipment of plant.....	8, 11
		Executive control.....	17
		Experience, accumulation and use of.	8



	Page.		Page.
Experts.....	70	Human motor.....	27a
Factory management.....	4a, 8, 11, 13, 14, 16, 18, 20a, 27, 28, 29, 31, 34	Humanizing effect of scientific man- agement.....	14
Taylor system.....	38-40, 42	Ideals, clearly defined.....	17
Investigation.....	44, 52	Idleness.....	20a
Factory organization.....	13	Imitation.....	37
Factory nurse.....	3	Incentive.....	7
Fads.....	15	Industrial leadership.....	20
Fair deal.....	17	Industrial methods, Great Britain....	5
Farm management.....	3a	Initiation into tasks.....	30
Fashion and fads.....	15	<i>See also</i> Instruction; Training.	
Fatigue.....	1, 4b, 7, 24, 25, 26, 27a, 28, 32	Inspection of products.....	13, 29
Fatigue museum.....	24	Installing efficiency methods.....	31, 39
Federal government.....	54, 58, 59, 61, 62, 63, 72, 73, 77, 81	Instruction.....	2, 9, 33
Accounting.....	74	<i>See also</i> Training.	
Agencies for investigating, official.....	52a	Insurance.....	4b, 12
Bonus system.....	44-52	Interest in work.....	9
Cost-keeping.....	82	Interviewing employees.....	2
Stop-watch system.....	44-52	Inventory.....	13
Federal trade commission.....	73	<i>See also</i> Stock taking.	
Ferracute Machine Co.....	34	Judgment.....	37
Filing.....	19	Labor representation in regulation of industry.....	3, 4a, 5, 20a
Fire prevention.....	7	Labor supply.....	4b
Food.....	1, 32, 35	Labor turnover.....	2, 3, 4b, 7, 9, 30, 32
Foreman's place.....	42	Lateness.....	3
Forms.....	4b, 12, 29, 30, 34, 40	Law, business.....	12
Functions of man.....	1	Laws, labor.....	25
Gantt wage system.....	20, 21, 28	Scientific management.....	71
Good-will.....	43	Taylor system.....	22
Government administration.....	52a, 56, 68, 70	Layout of plant.....	28
<i>See also</i> Federal government; Municipal government; State government.		Leaders in movement.....	14
Guild socialism.....	4a	Lefthandedness.....	27a
Habits.....	7, 15, 26, 37, 43	Legislative reference services.....	52a
Halsey wage system.....	28	Location of office.....	19
Handling men.....	7	Location of plant.....	13, 28
Health.....	7	Loss in case of failure.....	38
High pay for success.....	38	Love of the game.....	37
Hiring of labor.....	2, 7, 13, 28, 30, 36	Loyalty.....	7, 9, 33, 37
History.....	14, 53	Machine building plants.....	28
Home.....	35	Machine shop practice.....	18, 26, 39
Home conditions.....	2	Mail, handling.....	19
Hours.....	32	Management, relation to plant.....	7
Regulation of.....	25	Relation to labor.....	7
Long, dangers of.....	25	Manufacturing costs: <i>See</i> Cost accounting.	
Short, benefits of.....	25	Marketing.....	43
Housing.....	4b, 5	Materials, in stock.....	29
Human element.....	4b, 16, 26, 37, 75	Ordering.....	29
Human energy, conservation of... 23, 24		Storage.....	7
		Medical supervision.....	3
		Medicine, industrial.....	32
		Memorizing, art of.....	15
		Mental tests.....	2

	Page.		Page.
Methods, bibliography.....	41	Premiums paid Government em-	
Monotony of work.....	25	ployees, tables.....	51
Moral standards.....	35, 75	Primer.....	22
Motion study.....	2, 23, 24	Principles.....	17, 79, 80
<i>See also</i> Time study.		Production.....	20, 20a
Municipal government.....	58, 59, 65, 66	Profits.....	21
Administrative control.....	52a	Promotion.....	4b, 7, 14, 30
Agencies for investigating, offi-		Psychology, relation to business...	15, 37
cial and unofficial.....	52a	Psycho-physiology.....	1
Muscular fatigue.....	25	Public, effect on.....	41
<i>See also</i> Fatigue.		Public utilities, standards of service.	81
Naval vessels.....	78	Punctuality.....	7
Navy, United States.....	55, 78	Purchases.....	19
Navy yards.....	18, 78	Quantity and quality of work.....	21
Nervous fatigue.....	25	Railroads.....	6, 42
<i>See also</i> Fatigue.		Bibliography.....	41
Night work.....	32	Reading box movement.....	24
Noise.....	25	Records.....	2, 17, 20a, 76
Office management.....	12, 19	<i>See also</i> Forms.	
Office organization.....	12, 19, 28	Reeducation, functional.....	1
Operation.....	8, 11	Professional.....	1
Ordering material.....	29	War cripples.....	1
Organization.....	8, 16, 17, 28, 31, 34	Relaxation.....	37
Office.....	12, 19, 28	Reports of work.....	2
Organization for marketing.....	43	<i>See also</i> Records.	
Organization of family.....	35	Representation of labor on manage-	
Organized labor, relation to scientific		rial boards.....	3, 4a, 5, 20a
management... 6, 7, 14, 27, 41, 48, 49, 51		Responsibility, division of.....	12
Bibliography.....	41	Rest.....	32
Output.....	5, 9, 14, 32	<i>See also</i> Fatigue.	
Overtime.....	25, 32	Retailing.....	42
Personal factor.....	8	Reward, efficiency.....	17
Bibliography.....	41	<i>See also</i> Bonus system.	
Personnel.....	2, 12	Routing system.....	11, 34
Physical examination.....	2	Rowan wage system.....	28
Physiological basis.....	1	Sales.....	20
Physiological organization of work..	32	Salesmanship.....	19, 33, 36
Physiology, industrial.....	32	Schedules.....	17
Piece-rate system.....	7, 8, 21, 25, 42	Scientific prothesis.....	1
Placement.....	4	Secretarial work.....	12
Planning department.....	31, 42	Selection of workmen. <i>See</i> Hiring of	
Plants, industrial:		labor.	
Design.....	8, 11, 13	Selling.....	28, 43
Equipment.....	8, 11	Shipping and receiving.....	13
Layout.....	28	Ships.....	78
Location.....	13, 28	Shop stewards.....	4a
Scientifically managed.....	14	Slide rules.....	42
Pleasure.....	37	Social significance.....	60
Power.....	28	Solicitation.....	15
Practice.....	14, 80	Speed.....	25, 37
Premium system. <i>See</i> Bonus sys-		Spirit.....	60
tem.		Sporting spirit.....	37

	Page.		Page.
Standard practice instruction.....	17	Tools, care of.....	29
Standardization of tools.....	34	Standardization of.....	34
Standardized conditions.....	3, 17, 31, 38	Traffic.....	28
Standardized operations.....	17, 31, 34	Training of workers.....	1,
Standardized uniform record systems	76	4b, 7, 19, 20, 21, 30, 35, 36, 38	
Standards.....	16, 17	Transfer of workers.....	4b, 30
State government.....	57, 59	Turnover. <i>See</i> Labor turnover.	
Administrative control.....	52a	Twelve principles.....	17
Agencies for investigating, official and unofficial.....	52a	United States government. <i>See</i>	
Stenographic work.....	19	Army; Arsenal; Federal government; Navy.	
Stewards, shop.....	4a	Universities, efficiency in.....	10
Stock.....	13	Vacations.....	19
<i>See also</i> Stores.		Vocational guidance, value of.....	4
Stock taking.....	12	Wages... 4a, 7, 13, 14, 18, 19, 28, 33, 37, 42	
<i>See also</i> Inventory.		<i>See also</i> Bonus system; Piece-rate system.	
Stop-watch system.....	44-52	War cripples, reeducation.....	1
Storage of materials.....	7	Waste, elimination of.....	3a, 7, 16, 17, 69
Stores.....	12, 13, 19, 28, 34	Waste location.....	16
Symbolization.....	42	Waste products, saving.....	7
Tardiness.....	3	Waste time.....	18
Task work.....	20, 21	Watertown (Mass.) Arsenal..	48, 51, 52, 55
Taylor system ... 22, 27a, 28, 38, 39, 40, 42		Welfare work.....	7, 28
Investigation of.....	44-48, 51	Women's work.....	27a, 32, 42
Team work.....	4b	Workers share in shop management..	9
Technical education, Belgium.....	27a	<i>See also</i> Representation of labor on managerial boards.	
Temperamental qualities.....	15	Working power, maintenance of. 27a, 32	
Time study.....	4a,	Working principles.....	8
13, 18, 22-24, 31, 42, 47-52, 69		Works manager.....	28
Time taking.....	13		
Tool room.....	42		





RETURN TO the circulation desk of any  
University of California Library  
or to the

NORTHERN REGIONAL LIBRARY FACILITY  
Bldg. 400, Richmond Field Station  
University of California  
Richmond, CA 94804-4698

---

ALL BOOKS MAY BE RECALLED AFTER 7 DAYS

- 2-month loans may be renewed by calling (510) 642-6753
- 1-year loans may be recharged by bringing books to NRLF
- Renewals and recharges may be made 4 days prior to due date.

---

DUE AS STAMPED BELOW

---

**SENT ON ILL**

---

**MAY 22 2002**

---

**U. C. BERKELEY**

---

---

---

---

---

---

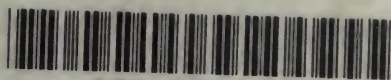
---

---

---

12,000 (11/95)

U.C. BERKELEY LIBRARIES



C006870318

M196670

HF6314  
M6

THE UNIVERSITY OF CALIFORNIA LIBRARY



